## AMENDMENTS TO THE DRAWINGS

Attached is a sheet showing proposed changes to Figure 4 in red and a replacement sheet incorporating such changes.

Attachment:  Replacement Sheet(s)
                Annotated Sheet Showing Changes

## REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

Applicant thanks Examiners Emdadi and Yao for the courtesy of a personal interview with Applicant's representative, Daniel Kligler (Reg. No. 41,120), held in the USPTO on September 27. At the interview, Applicant's representative pointed out support in the specification for the invention recited in independent claims 1 and 9, and it was agreed that the rejection of the claims under 35 U.S.C. 112, first paragraph, would be withdrawn. Applicant's representative also presented a draft amendment to claim 1 and argued the patentability of the amended claims over the cited art (Ballintine, U.S. Patent 6,366,556). The Examiners suggested further changes in the language of claim 1 to clarify the meaning of the claim and its distinction over the cited art, and requested that the language of Fig. 4 be amended in literal support of the claim. Applicant has amended the claims and Fig. 4 as agreed in the interview.

The drawings were objected to for not showing the claimed feature of the specific mask "indicating whether the flow was to be conveyed over the segment had the fault not occurred." Applicant has accordingly amended Fig. 4, as noted above, in order to recite explicitly in step 52 that the specific mask indicates the segments on the desired path of data flow. The language of step 54 has also been amended, as agreed in the interview, to recite that the general and specific masks are superimposed in order to find their

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conjunction. In view of these amendments to Fig. 4, Applicant believes that the objection to the drawings should now be withdrawn.

Applicant respectfully traverses the rejection of claims 1, 4-9 and 12-16 under 35 U.S.C. §112, first paragraph, for alleged lack of enablement in the specification for the step of "assigning a respective specific mask bit to each of the segments, indicating whether the flow was to be conveyed over the segment had the fault not occurred." Applicant has amended the language of independent claims 1 and 9, as suggested by the Examiners in the interview, to clarify that each specific mask bit indicates "whether the flow was to be conveyed over the segment had the segment been operational before occurrence of the fault." The claimed technique for building the specific mask is described in the specification on page 10, lines 18-26, along with a concrete example of a specific mask corresponding to the data flow shown in Fig. 1. Thus, as agreed in the interview, all the claims in this application now meet the requirements of 35 U.S.C. §112, first paragraph.

Claims 1, 4-9 and 12-16 were also rejected under 35 U.S.C. 102(e) over Ballintine et al. (U.S. Patent 6,366,556). Applicant also respectfully traverses this ground of rejection.

Independent claims 1 and 9 recite a method of fault protection and a communication device for use in a bidirectional ring network. The method uses a general

mask and a specific mask, both of which have the form of bitmaps, with a bit assigned to each network segment. When a fault occurs in the network, the general mask indicates which of the segments is reachable following the fault. In the specific mask, each bit indicates whether the flow was to be conveyed over the corresponding segment had the segment been operational before occurrence of the fault. To determine the disposition of the flow, the general and specific bitmap masks are superimposed. Thus, the nodes in the network are able to decide rapidly and simply, with minimal computational cost, how to allocate network resources to data flows when the fault occurs (see page 5, lines 4-7, in the specification).

Ballintine describes methods for providing virtual rings in SONET networks. An unused byte in the SONET path overhead (POH) is used to provide a finer granularity of protection (abstract). For this purpose, either the Z3 or Z4 byte of the POH is used for addressing the nodes in a virtual ring (col. 7, lines 16-20). The specific use of the Z3 bits in a multiframe structure is described by Ballintine in col. 10, lines 50-59. It can be clearly observed (as pointed out in the interview) that none of these bits are used as mask bits, with a bit assigned to each segment as required by claims 1 and 9 in the present application. The bits referred to in Ballintine's Fig. 7 are used simply for framing and parity checking (col. 12, line 63 – col. 13, line 21).

To summarize, claims 1 and 9 in the present patent application recite a well-defined mechanism for fault protection, based on superimposing two bitmap masks, each
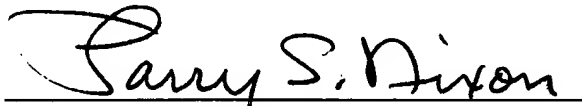
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with a bit per segment. Ballintine's fault protection mechanism is fundamentally different, using POH bits to address individual nodes. He neither teaches nor suggests using the POH bits (or any other bits) to specifically indicate certain network segments with a bit per segment in two different masks, and thus cannot be taken to teach or suggest superimposing such masks.

Therefore, independent claims 1 and 9 are believed to be patentable over the cited art. In view of the patentability of claims 1 and 9, it is not believed necessary to discuss the further patentable distinctions for dependent claims 4-8 and 12-16.

Applicant believes the amendments and remarks stated above to be fully responsive to all of the objections and grounds of rejection raised by the Examiner. In view of these amendments and remarks, all the claims in the present patent application are believed to be in condition for allowance. Prompt notice to this effect is requested.

Respectfully submitted,

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*Annotated Sheet Showing Changes*
~~PROPOSED DRAWING AMENDMENTS~~

FOR SN ___09/941,723___

# FIG. 4

BUILD GENERAL MASK
OF UNREACHED SEGMENTS — 50

*INDICATING THE SEGMENTS ON DESIRED PATH OF*

BUILD SPECIFIC MASK
~~FOR~~ DATA FLOW — 52

*SUPERIMPOSE GENERAL AND SPECIFIC MASKS TO*

FIND CONJUNCTION ~~OF GENERAL AND SPECIFIC MASKS~~ — 54

CONJUNCTION =ZERO ?

YES → NO STEERING REQUIRED — 56

NO

CONJUNCTION =GENERAL MASK ?

NO → DISCARD DATA FLOW PACKETS — 60

YES

STEER DATA FLOW — 58